

**Practice: 466 - Land Smoothing****Scenario: #1 - Minor Shaping****Scenario Description:**

Removing irregularities on the land surface of cropland by use of heavy equipment.

**Before Situation:**

Field damaged by flooding (resulting in gullies), past agricultural practices, or other topographic issues causing drainage or field workability issues.

**After Situation:**

Land levelling by backhoe, dozer, scraper or other heavy equipment to correct irregularities and address drainage or workability issues. Typically consists of moving less than 100 cy/acre of material.

**Scenario Feature Measure:** Acres of land treated

**Scenario Unit:** Acre

**Scenario Typical Size:** 2

**Scenario Cost:** \$724.18

**Scenario Cost/Unit:** \$362.09

**Cost Details (by category):**

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
<b>Equipment/Installation</b>						
Scraper, pull, 7 CY	1206	Pull type earthmoving scraper with 7 CY capacity. Does not include pulling equipment or labor. Add Tractor or Dozer, 160 HP typically required for single scraper.	Hour	\$15.55	1	\$15.55
Tractor, agricultural, 160 HP	1203	Agricultural tractor with horsepower range of 140 to 190. Equipment and power unit costs. Labor not included.	Hour	\$75.64	1	\$75.64
Dozer, 140 HP	927	Track mounted Dozer with horsepower range of 125 to 160. Equipment and power unit costs. Labor not included.	Hour	\$124.76	2	\$249.52
<b>Labor</b>						
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$24.95	5	\$124.75
<b>Mobilization</b>						
Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$258.72	1	\$258.72

**Practice: 466 - Land Smoothing****Scenario: #2 - Field Shaping****Scenario Description:**

Removing irregularities on the land surface of cropland by use of heavy equipment.

**Before Situation:**

Depressions, mounds, old terraces, turn rows, and other surface irregularities interfere with the application of needed soil and water conservation and management practices, such as new terraces.

**After Situation:**

Motor grader or other heavy equipment used to correct irregularities and address drainage or workability issues. Typically less than 100 cy/acre material moved, or about 150 cy per 1000 LF of terrace.

**Scenario Feature Measure:** Feet of land leveled

**Scenario Unit:** Foot

**Scenario Typical Size:** 10,000

**Scenario Cost:** \$4,211.07

**Scenario Cost/Unit:** \$0.42

**Cost Details (by category):**

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
<b>Equipment/Installation</b>						
Motor Grader, 200 HP	1782	Motor Grader or Maintainer, 200 hp. Typical of equipment with HP in range of 170-240. Equipment cost, does not include labor.	Hour	\$158.41	20	\$3,168.20
<b>Labor</b>						
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$24.95	22	\$548.90
<b>Mobilization</b>						
Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$493.97	1	\$493.97